Response to 'High-volume peritoneal dialysis in acute kidney injury'

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We appreciate Dr Soni's attention[1] to our paper.[2] The mortality rate was 58% for high-volume peritoneal dialysis (HVPD) and 53% for daily hemodialysis (DHD), and there were 25 survivors in the HVPD group and 29 survivors in the DHD group.

We agree that it would be interesting to observe the efficacy of PD in severe hypercatabolic patients, especially when a high volume of dialysis fluid is used. However, we have excluded these patients because studies have suggested that PD cannot control uremia in severe hypercatabolic acute kidney injury (AKI). In these cases, DHD or continuous renal replacement therapies have been the preferred method.[3]

In PD, clearance is limited by dialysate flow, membrane permeability, and area (KoA).[4] Therefore, a 2-l exchange with a dwell time of approximately 30 min, as we proposed,[2] can achieve a dialysate saturation of about 50%. This means that an average urea clearance of 24 l/day can be expected, leading to a Kt/V of 0.65/day in a patient with body weight between 65 and 70 kg, which is close to the value that we observed. However, it is also true that PD is not the most efficient therapy, because clearance per exchange can be decreased if a shorter dwell time is applied.

Further randomized studies should be undertaken in severe hypercatabolic patients to show the true effectiveness of PD. We are performing a prospective study to explore the role of HVPD in patients with severe hypercatabolic AKI assessed by the presence of excess urea nitrogen.

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3. Chitalia VC, Almeida AF, Rai H *et al.* Is peritoneal dialysis adequate for hypercatabolic acute renal failure in developing countries? *Kidney Int* 2002; **61**: 747–757.
4. Ronco C. Can peritoneal dialysis be considered an option for the treatment of acute kidney injury? *Perit Dial Int* 2007; **27**: 251–253.

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